

emplified by the decreased potential for systemic accumulation during continuous techniques.<sup>3</sup>

In regard to technique, the "pure" secondary effects of peridural anesthesia have been firmly established with human volunteer studies.<sup>4,5,6</sup> These studies have shown that in normal, unmedicated man, the circulatory effects are influenced by: (1) the number of vasomotor segments interrupted; (2) whether or not cardiac sympathetics are blocked; (3) direct and indirect action of the local anesthetic on the heart; (4) cardiovascular effects of epinephrine; and (5) the condition of the patient. In normal man, block as high as T2-3 does not produce significant circulatory changes. Local anesthetics have been shown to have a direct depressant effect and indirect chronotropic effect through stimulation of sympathetic centers in the brain. The net effect depends on the arterial blood levels: Injection of large single doses, or several repeated doses, results in arterial blood levels of 4-7  $\mu\text{g}$  per ml, which produce sufficient stimulation of sympathetic centers to counteract the direct depressant effect, resulting in an increase in heart rate, in cardiac output and in mean arterial pressure. Excessive doses produce enough direct myocardial depression to offset the stimulating action, resulting in decrease in cardiac output and arterial pressure. Epinephrine absorbed from the peridural space produces a beta adrenergic stimulating action reflected by an increase in cardiac output but a pronounced decrease in total peripheral resistance, with a net effect of decrease in mean arterial pressure. These studies further showed that in normal man removal of a modest amount of blood (10 ml per kg of body weight or 13 percent of blood volume) makes the subject highly vulnerable to extensive vasomotor blockade and the direct depressant effect of the local anesthetic used for high peridural block.

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## Emergency Outpatient Anesthesia

The basic concept for outpatient surgical operations under general anesthesia is that the administration of an anesthetic today does not of itself require hospitalization. The patient to whom the anesthetic is to be given and the nature of the proposed operation are the limiting factors.

It is essential that the outpatient be as carefully evaluated for anesthesia as if he were an inpatient. This can be done with the cooperation of the surgeon in the selection of the type of patient, and by immediate pre-anesthetic evaluation of all patients by an anesthesiologist.

Operative procedures are limited to those in which post-operative bleeding is highly unlikely. Hence tonsils and adenoids are not accepted. Plastic procedures, examinations under anesthesia, including a diagnostic dilation and curettage, cystoscopy, and peritoneoscopy are all done. Herniorrhaphy on a child is acceptable.

No patient is permitted to leave the outpatient recovery area unless accompanied by a responsible adult. By use of care in the selection of patients and with full cooperation of surgeons, many procedures have been provided patients at less cost and with use of fewer hospital beds. Ten years' experience indicates that outpatient surgical operation under general anesthesia is practical, economical and provides a health care service to many patients who might otherwise not be treated.

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## Psychedelic Drugs and Anesthesia

There is very little information in the recent medical literature regarding the effects of anesthetic agents on patients who abuse psychedelic drugs.

In one excellent study, Jonston et al reported the effects of acute and chronic administration of